

Non-metal radionuclides such as ^{123}I , ^{125}I and ^{131}I may be covalently linked to the moiety Z by a substitution or addition reaction well known from the state of art.

In a second embodiment, the compound of formula (I) comprises a moiety Z carrying one or more imageable moieties M useful in the PET imaging modality. M then denotes a radioemitter with positron-emitting properties. Preferred groups M are the radionuclides ^{11}C , ^{18}F , ^{68}Ga , ^{13}N , ^{15}O and ^{82}Rb . ^{18}F is specifically preferred.

When M denotes a metallic radionuclide then Z comprises a chelating agent suitable for forming a stable chelate with M. Such chelating agents are well known from the state of art and typical examples of such chelating agents are described in Table I of WO 01/77145 and to the previous part on Radio and SPECT imaging.

In another preferred embodiment Z is the DOTA chelating agent and M is ^{68}Ga which can be readily introduced in to the chelate using microwave chemistry.

Non-metal radionuclides such as ^{18}F may be covalently linked to the moiety Z by a substitution or addition reaction well known from the state of art and also described eg. in WO03/080544 which is hereby incorporated by reference.

In a third embodiment, the compound of formula (I) comprises a moiety Z carrying one or more imageable moieties M useful in the MR imaging modality. M here denotes a paramagnetic metal such those mentioned in US patent 4,647,447, Gd^{3+} , Dy^{3+} , Fe^{3+} and Mn^{2+} are particularly preferred and Z comprises a chelating agent, in particular a chelating agent such as acyclic or cyclic polyaminocarboxylates (e.g. DTPA, DTPA-BMA, DOTA and DO3A) as described e.g. in US patent 4,647,447 and WO 86/02841. M may also denote metal oxides such as superparamagnetic, ferrimagnetic or ferromagnetic species which are absorbed by Z, e.g. such that Z function as a coating to the metal oxide. Metal oxides for use as MR contrast agents are described e.g. in US patent 6,230,777 which is hereby incorporated by reference.

In a fourth embodiment the compound of formula (I) comprises a moiety Z carrying one or more imageable moieties M useful in the X-ray imaging modality. M here denotes a heavy metal such as W, Au and Bi preferably in the form of oxides which may be absorbed to Z. Iodinated aryl derivatives are particularly well known as X-ray contrast agents, e.g. Iopamiron™ and Omnipaque™.

Ultrasound imaging agents in the form of gas filled microvesicles can be utilised in the imaging of receptors e.g. when they are functionalised for binding to the vector V as described in the state of art e.g. in WO98/18500.